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DETAILED DESCRIPTION

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[Detailed Description of the Invention]

[0001]

[Industrial Application]This invention relates to the water proof dustproof cap for preventing water, dust, etc. from infiltrating into the inside of a case from holes, such as a jack provided in the case of sized electronic equipment.

[0002]

[Description of the Prior Art]In sized electronic equipment, for example, a field radio etc., external connection parts or apparatus, such as an earphone and a microphone, may be used for an electronic equipment body via a code, electrically being connected to it. This connection is made by generally inserting the plug provided at the tip of a code in the jack provided in the case. Since field radios may be used in the environment which gets the inside of rain, or sweat, or a dusty environment, they have prevented water and dust from permeating from a jack with a water proof dustproof cap.

[0003]Drawing 8 shows an example of the conventional water proof dustproof cap. This water proof dustproof cap 11 is what fabricated to one the covering device 15 provided with the projection 14 which fits into the receptacle part 13a of the jack 13 attached to the case 12, and the mounting piece 16 extended from this covering device 15 with the material which has pliability, The mounting piece 16 is \*\*\*\*ed to the case 12, and it is fixing by 17.

[0004]Another conventional water proof dustproof cap 21 shown in drawing 9, While fabricating to one the covering device 25 provided with the projection 24 which fits into the receptacle part 23a of the jack 23 attached to the case 22, and the mounting piece 26 extended from this covering device 25 with the material which has pliability, the mounting shaft 27 is fabricated to the mounting piece 26 at one. The mounting shaft 27 is attached to the case 22 by becoming the shank 27a of mist or a byway from the head 27b of mist or a major diameter from the attaching hole 28, and pressing the head 27b fit in the attaching hole 28 from the attaching hole 28 of the case 22.

[0005]

[Problem(s) to be Solved by the Invention]However, since it can exchange by \*\*\*\*ing from the outside and removing 17 in the conventional water proof dustproof cap 11 shown in drawing 8 when the portion of between the covering device 15 and the mounting pieces 16 or others goes out by degradation etc., exchange is easy, but. The

screw thread 17 was outside visible and there was a problem that appearance was bad and exchange took time and effort. There was a problem that a user, on the other hand, could not exchange easily the water proof dustproof cap 21 shown in drawing 9 since it is necessary to open the case 22 and only a maker and a serviceman can do it as for this in exchanging although appearance is good.

[0006] This invention solves such a conventional problem.

Appearance of the purpose is good and it is providing the water proof dustproof cap of the sized electronic equipment which a user can exchange easily.

[0007]

[Means for Solving the Problem] This invention forms at one a belt part which connects a removable suspending portion, a plug part removable to a receptacle part of a case, and a suspending portion and a plug part in a locking hole which consists of a wide area formed in a case, and a narrow part to achieve the above objects with material which has pliability.

[0008]

[Function] Therefore, what is necessary is just to remove a suspending portion from a locking hole in this invention, when exchanging, while being able to prevent invasion of the water from a receptacle part, or dust by inserting the suspending portion of a water proof dustproof cap in the locking hole of a case, stopping it, and inserting a plug part in the receptacle part of a case.

Therefore, appearance is good and a user can also exchange easily.

[0009]

[Example] Drawing 1 shows the composition of one example of this invention. In drawing 1, 1 shows the whole water proof dustproof cap, and 2 is a suspending portion and consists of the nose gear 3 and the hind legs 4. 5 is a plug part and 6 is a belt part which connects the suspending portion 2 and the plug part 5. These suspending portions 21, the plug part 5, and the belt part 6 are fabricated by one with the material which has the pliability of a plastic, rubber, etc.

[0010] The nose gear 3 of the suspending portion 2 has the leg 3a of a square pole, and the hook 3b which is provided in the tip part and projects toward the direction of a tip of the belt part 6, and the hind legs 4 have the leg 4a of a square pole, and the hook 4b which is provided in the tip part and projects in the cross direction and the direction of the back end of the belt part 6. The plug part 5 is formed in a cylindrical shape, and is cutting off the tip part the corners. The belt part 6 is formed in the type of "\*\*\*\*" laminated.

[0011] or [ that drawing 2 shows the composition by the side of electronic equipment, 7 is a case, 8 is an accommodation recess for storing the water proof dustproof cap 1, and it is the same as the outside dimension of the belt part 6 of the water proof dustproof cap 1, and a width dimension ] -- or it is formed a little more greatly. 9 is a locking hole and consists of the wide area 9a and the narrow part 9b. 10 is a receptacle part of a jack. The locking hole 9 and the receptacle part 10 are formed in the upper part [ of the corner part of the case 7 ], and flank side. 100 is plugs, such as an earphone inserted in the receptacle part 10.

[0012] Next, assembly operation of the above-mentioned example is explained with reference to drawing 3. Drawing 3 (a) is a deployment front view of the water proof

dustproof cap 1, and drawing 3 (b) is a deployment top view of the accommodation recess 8 of the case 7. Here, the locking hole 9 side is used as the tip part A, and the receptacle part 10 side is explained as the rear end part B. First, the nose gear 3 of the water proof dustproof cap 1 is inserted in the locking hole 9, and it pushes on the tip part A side. Thereby, the hook 3b of the nose gear 3 is stopped at the edge by the side of the tip part A of the locking hole 9. Next, sagging the belt part 6 and the hind legs 4, the hook 4b of the hind legs 4 is inserted in the portion of the left-behind locking hole 9, and it pushes on it at the rear end part B side. Thereby, while the leg 4a of the hind legs 4 enters in the narrow part 9b of the locking hole 9, the hook 4b is stopped at the edge of the narrow part 9b. Thereby, it is certainly fixed to the locking hole 9, and even if it pulls the water proof dustproof cap 1 in which direction, it does not separate simply. Subsequently, when inserting the plug part 5 of the water proof dustproof cap 1 in the receptacle part 10 when the plugs 100, such as an earphone, are not inserted [namely, ] in the receptacle part 10 if needed, and inserting the plug 100, the plug part 5 is sampled from the receptacle part 10.

[0013]When the water proof dustproof cap 1 needs to be exchanged, Since the hook 3b of the nose gear 3 moves to the rear end part B side and separates from the edge of the locking hole 9 by first pressing the end by the side of the tip part A of the belt part 6 of the water proof dustproof cap 1 to the rear end part B side, After raising then and extracting the hook 3b of the nose gear 3 from the locking hole 9, by lengthening the belt part 6 to the tip part A side, the hook 4b of the hind legs 4 separates from the narrow part 9b of the locking hole 9, and the suspending portion 2 can be pulled out from the locking hole 9.

[0014]Thus, according to the above-mentioned example, permeation of the water from the receptacle part 10 or dust can be prevented by inserting the suspending portion 2 of the water proof dustproof cap 1 in the locking hole 9 of the case 7, stopping it, and inserting the plug part 5 in the receptacle part 10 of the case 7. Since the water proof dustproof cap 1 is exactly settled in the accommodation recess 8 of the case 7, its exterior appearance is good. Since what is necessary is to move the suspending portion 2 and just to remove from the locking hole 9, when exchanging the water proof dustproof cap 1, a user can also exchange easily.

[0015]various this inventions can be boiled and changed. For example, as shown in drawing 4, between the nose gear 3A of the water proof dustproof cap 1A and the hind legs 4A may be extended to the nose gear 3A with the width of leg 4Aa of the hind legs 4A, and the portion may be formed in the voussure. As shown in drawing 5, the plug part 5A of the water proof dustproof cap 1A may be formed in an udder form. As shown in drawing 6, wide area 9Aa of the locking hole 9A by the side of a case may be formed in an ellipse, and narrow part 9Ab may be formed in a rectangle. In this case, it is good to form circularly the leg of the nose gear 3A of the water proof dustproof cap 1A according to the shape of the locking hole 9A. As shown in drawing 7, it is applicable also like the sized electronic equipment which equipped the upper part of the corner part of the case 7A with the receptacle part, and equipped the flank with the locking hole.

[0016]

[Effect of the Invention]A suspending portion removable to the locking hole which consists of a wide area formed in the case, and a narrow part in this invention so that clearly from the above-mentioned example, The belt part which connects a removable

plug part, and a suspending portion and a plug part with the receptacle part of a case is formed in one by \*\*\*\*\* which has pliability, What is necessary is just to remove a suspending portion from a locking hole, when exchanging, while being able to prevent permeation of the water from a receptacle part, or dust by inserting the suspending portion of a water proof dustproof cap in the locking hole of a case, stopping it, and inserting a plug part in the receptacle part of a case.

Therefore, appearance has the effect that it is good and a user can also exchange easily.

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[Translation done.]